

Notice of Allowability

Application No.

09/724,200

Examiner

Abbas I Abdulsalam

Applicant(s)

TADAYUKI ISHIDA ET AL.

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 07/23/04.
2. ☒ The allowed claim(s) is/are 2-4, 6-10, 12-14 and 16-27 (renumbered as claims 1-23).
3. ☐ The drawings filed on 27 November 2000 are accepted by the Examiner.
4. ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☒ All b) ☐ Some* c) ☐ None of the:
 1. ☒ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____


Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
 6. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3. ☐ Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application (PTO-152)
6. ☐ Interview Summary (PTO-413), Paper No./Mail Date _____
7. ☐ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other _____


XIAO WU
PRIMARY EXAMINEE

DETAILED ACTION***Allowable Subject Matter***

1. The following is an examiner's statement of reasons for allowance:

Kitamura (USPN 5308917) teaches a touch responsive setting apparatus including a keyboard (10) generating touch data (p), and a curve memory (40) storing curve data values with their corresponding velocity values. Kitamura teaches generation of touch curves with respect to various degrees of the strength of depressions. Furthermore, Kitamura teaches an interpolator (30) which interpolates the input touch data and form a response curve representing touch-tone level character. See col. 3, lines 1-12, col.5, lines 51-56, Fig 2, Fig (8-10). In addition, Kitamura teaches the process for regenerating a touch curve data under various touch setting points and calculation of the corresponding velocities. See col. 5, lines 15-43 and lines 50-65.

Regarding claim 2, none of the cited prior art teaches or suggests a touch control apparatus comprising: a keyboard device which generates touch data indicative of strength of keying power; a touch curve memory which stores a touch curve indicative of a correspondence relation of velocity and- touch data; a corrector which corrects velocity values of said touch curve stored in said touch curve memory based on said touch data generated by said keyboard device to generate a new touch curve; and a mode switch which switches an operation mode of said touch control apparatus to a predetermined operation mode wherein said corrector comprises: a correction coefficient generator which generates a correction coefficient composed of a ratio of one of said velocity values corresponding to one of said touch data generated by said

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keyboard device under said predetermined operation mode to a maximum value of said velocity values, wherein the correction coefficient is variable in accordance with the strength of the keying power; and a touch curve generator which multiplies a plurality of said velocity values by said correction coefficient to shift the touch curve, thereby generating the new touch curve.

Regarding claim 6, none of the cited prior art teaches or suggests a touch control apparatus comprising: a keyboard device which generates touch data indicative of strength of keying power; a correction curve memory which stores a correction curve indicative of correction values to correct a keyboard curve indicative of a correspondence relation of velocity and touch data, said correction values corresponding to said touch data generated by said keyboard device; a corrector which corrects a plurality of the correction values stored in said correction curve memory based on said touch data generated by said keyboard device to shift the correction curve, thereby generating a new correction curve, wherein the correction values are variable in accordance with the strength of the keying power; and a mode switch which switches an operation mode of said touch control apparatus to a predetermined operation mode, wherein said corrector, when a correction value corresponding to said touch data generated by said keyboard device under said predetermined operation mode is different from a predetermined standard value, corrects said correction curve stored in said correction curve memory such that said correction value becomes the predetermined standard value.

Regarding claim 12, none of the cited prior art teaches or suggests a touch control method comprising: generating touch data indicative of strength of keying power; storing a touch curve

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indicative of a correspondence relation of velocity and touch data; correcting velocity values of said touch curve based on said generated touch data to generate a new touch curve; and switching an operation mode to a predetermined operation mode, wherein said correcting velocity values comprises: generating a correction coefficient composed of a ratio of one of said velocity values corresponding to one of said touch data generated in said touch curve generating step under said predetermined operation mode to a maximum value of said velocity values, wherein the correction coefficient is variable in accordance with the strength of the keying power; and multiplying a plurality of said velocity values by said correction coefficient to shift the touch curve, thereby generating the new touch curve.

Regarding claim 16, none of the cited prior art teaches or suggests a touch control method comprising: generating touch data indicative of strength of keying power; storing a correction curve indicative of correction values to correct a keyboard curve indicative of a correspondence relation of velocity and touch data, said correction values corresponding to said touch data generated in said touch data generating step; correcting a plurality of said stored correction values based on said generated touch data to shift the correction curve, thereby generating a new correction curve, wherein the correction values are variable in accordance with the strength of the keying power; and switching an operation mode to a predetermined operation mode, wherein said correcting said stored correction values, when a correction value corresponding to said touch data generated under said predetermined operation mode is different from a predetermined standard value, corrects said stored correction curve such that said correction value becomes the predetermined standard value.

Regarding claim 26, none of the cited prior art teaches or suggests a touch control apparatus comprising: a keyboard device which generates touch data indicative of strength of keying power, said keyboard comprising a plurality of keys; a correction curve memory which stores a correction curve indicative of correction values to correct a keyboard curve indicative of a correspondence relation of velocity and touch data, said correction values corresponding to said touch data generated by said keyboard device, wherein the correction curve is generated through pushing at least one of the plurality of keys using a single keying power; and a corrector which corrects a plurality of the correction values stored in said correction curve memory based on said touch data generated by said keyboard device to shift the correction curve, thereby generating a new correction curve, wherein the correction values are variable in accordance with strength of the single keying power.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

2. Any inquiry concerning this communication or earlier communication from the examiner should be directed to **Abbas Abduselam** whose telephone number is **(703) 305-8591**. The examiner can normally be reached on Monday through Friday (9:00-5:30).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, **Richard Hjerpe**, can be reached at **(703) 305-4709**.

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Any response to this action should be mailed to:

Commissioner of patents and Trademarks

Washington, D.C. 20231

or faxed to:

(703) 872-9314

Hand delivered responses should be brought to Crystal Park II, Crystal Drive, Arlington, VA, Sixth Floor (Receptionist).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Technology center 2600 customer Service office whose telephone number is (703) 306-0377.

Abbas Abdulsalam

Examiner

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October 29, 2004



**XIAO WU
PRIMARY EXAMINER**